

ABSTRACT

A transgenic, non-human mammal useful for assessing the effect of candidate chemotherapeutic drugs on the growth of brain tumors in vivo is provided. Incorporated into the genome of the transgenic mammal, which preferably is a rodent, is a transgene which comprises a promoter comprising the nuclear factor binding region of the RR2 cis acting element of a fibroblast growth factor 1B (FGF1B) promoter. Operably linked to the promoter is reporter gene comprising a sequence which encodes the SV40 large T antigen. A transgenic, non-human mammal useful for identifying and isolating FGF1 producing brain cells. Incorporated into the genome of these transgenic animals is a transgene which comprises a promoter comprising the nuclear factor binding region of the RR2 cis acting element of an fibroblast growth factor 1B (FGF1B) promoter. Operably linked to the promoter is reporter gene comprising a sequence which encodes a protein or polypeptide other than an SV40 large T antigen. A method of obtaining neural stem cells from a sample of cells obtained from an animal is also provided. Such method comprises introducing the FGF1B-detector transgene into a sample of cells that have been obtained from the animal, and assaying for expression of the detectable marker in the cells, wherein cells that express the marker are neural stem cells. The cells which express the detectable marker can then be isolated from the population to provide a sub-population of neural stem cells.